

AMENDMENTS TO THE CLAIMS

Following is a listing of all claims in the present application, which listing supersedes all previously presented claims:

Listing of Claims:

1. (Currently Amended) A method for analyzing a sample by employing a Fast Fourier Transformation method, comprising:

generating an image of a region of the sample to be analyzed;

generating data having a frequency from a plurality of portions of the image by the Fast Fourier Transformation method; and

analyzing the generated data from the plurality of portions to determine whether the region is normal or abnormal without using a separate reference sample.

2. (Original) The method for analyzing a sample by employing a Fast Fourier Transformation method as claimed in claim 1, wherein the region includes a periodically formed pattern.

3. (Original) The method for analyzing a sample by employing a Fast Fourier Transformation method as claimed in claim 1, wherein the region is formed on a semiconductor substrate and corresponds to a cell region including a periodic pattern.

4. (Original) The method for analyzing a sample by employing a Fast Fourier Transformation method as claimed in claim 3, wherein the periodic pattern has a line width and is formed by an etching process.

5. (Original) The method for analyzing a sample by employing a Fast Fourier Transformation method as claimed in claim 1, wherein the image is generated by a scanning electron microscope.

6. (Original) The method for analyzing a sample by employing a Fast Fourier Transformation method as claimed in claim 1, further comprising defining the image into at least two pixel units.

7. (Original) The method for analyzing a sample by employing a Fast Fourier Transformation method as claimed in claim 1, further comprising providing an alarm when the region is abnormal.

8. (Currently Amended) A method for analyzing a sample by employing a Fast Fourier Transformation method, comprising:

generating a magnified image of a minute pattern formed in a cell region of a semiconductor substrate;

measuring a line width of the minute pattern using the magnified image;

generating data having a frequency from a plurality of portions of the image by the Fast Fourier Transformation method; and

analyzing the generated data from the plurality of portions to determine whether the minute pattern is normal or abnormal without using a separate reference sample.

9. (Currently Amended) An apparatus for analyzing a sample by employing a Fast Fourier Transformation method, comprising:

an image generation part for generating an image of a region of the sample to be analyzed;

a data generation part for generating data having a frequency from a plurality of portions of the image by the Fast Fourier Transformation method; and

a data discrimination part for analyzing the generated data from the plurality of portions to determine whether the region is normal or abnormal without using a separate reference sample.

10. (Original) The apparatus for analyzing a sample by employing a Fast Fourier Transformation method as claimed in claim 9, wherein the image generation part includes a scanning electron microscope.

11. (Original) The apparatus for analyzing a sample by employing a Fast Fourier Transformation method as claimed in claim 9, further comprising a display part for displaying the generated data.

12. (Original) The apparatus for analyzing a sample by employing a Fast Fourier Transformation method as claimed in claim 9, further comprising an alarm part for providing an alarm when the region is abnormal.

13. (Currently Amended) An apparatus for analyzing a sample by employing a Fast Fourier Transformation method, comprising:
- a scanning electron microscope for generating a magnified image of a minute pattern formed in a cell region of a semiconductor substrate;
 - a line width measurement part for measuring a line width of the minute pattern using the magnified image;
 - a data generation part for generating data having a frequency from a plurality of portions of the magnified image by the Fast Fourier Transformation method; and
 - a data discrimination part for analyzing the generated data from the plurality of portions to determine whether the minute pattern is normal or abnormal without using a separate reference sample.

14 - 17. (Cancelled)